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1 High-power optical amplifiers for commercial analog and digital applications
Mysore, S.M.;
Optical Fiber Communications, 1996. OFC '96 , 25 Feb.-1 March 1996
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1 [Remotely-sensed geophysical databases: experience and implications for generalized DBMS](#)

Guy M. Lohman, Joseph C. Stoltzfus, Anita N. Benson, Michael D. Martin, Alfonso F. Cardenas
May 1983 **ACM SIGMOD Record , Proceedings of the 1983 ACM SIGMOD international conference on Management of data**, Volume 13 Issue 4

Full text available: [pdf\(1.85 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

This paper presents the characteristics of scientific remotely-sensed databases that are relevant to --- and pose unique challenges for --- general-purpose database management systems (DBMSs). We describe a prototype system that integrates geophysical data and its metadata from both satellite and *in situ* sources, using a relational general-purpose DBMS to manage the catalog and observational data, and a video optical disk to archive images. Based upon our experience with this application, ...

2 [IS '97: model curriculum and guidelines for undergraduate degree programs in information systems](#)

Gordon B. Davis, John T. Gorgone, J. Daniel Couger, David L. Feinstein, Herbert E. Longenecker

December 1997 **ACM SIGMIS Database , Guidelines for undergraduate degree programs on Model curriculum and guidelines for undergraduate degree programs in information systems**, Volume 28 Issue 1

Full text available: [pdf\(7.24 MB\)](#)Additional Information: [full citation](#), [citations](#)

3 [Multipoint audio and video control for packet-based multimedia conferencing](#)

F. Gong

October 1994 **Proceedings of the second ACM international conference on Multimedia**

Full text available: [pdf\(979.60 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

With the advent of broadband integrated services data network (B-ISDN) technologies such as Asynchronous Transfer Mode (ATM) networks, packet-based multimedia (e.g., live audio and video, animation, and text) conferencing is becoming a viable means for achieving virtual proximity, which enables us to overcome the physical separation in space and time and to interact more effectively in our science and engineering endeavors. To bring about the reality of virtual proximity, many technical issues ...

4 [Fast detection of communication patterns in distributed executions](#)

Thomas Kunz, Michiel F. H. Seuren

November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research**

Full text available:  pdf(4.21 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time diagrams are often used to obtain a better understanding of the execution of the application. The visualization tool we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often very complex and do not provide the user with the desired overview of the application. In our experience, such tools display repeated occurrences of non-trivial commun ...

5 Data replicas in distributed information services

H. M. Gladney

March 1989 **ACM Transactions on Database Systems (TODS)**, Volume 14 Issue 1

Full text available:  pdf(1.94 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

In an information distribution network in which records are repeatedly read, it is cost-effective to keep read-only copies in work locations. This paper presents a method of updating replicas that need not be immediately synchronized with the source data or with each other. The method allows an arbitrary mapping from source records to replica records. It is fail-safe, maximizes workstation autonomy, and is well suited to a network with slow, unreliable, and/or expensive communications links ...

6 An experimental laboratory for pattern recognition and signal processing

N. M. Herbst, P. M. Will

April 1972 **Communications of the ACM**, Volume 15 Issue 4

Full text available:  pdf(2.02 MB) Additional Information: [full citation](#), [abstract](#), [references](#)

An interactive computer-controlled scanning and display system has been in operation at the IBM Thomas J. Watson Research Center for three years. The system includes two flying-spot scanners and a TV camera specially interfaced to a process control digital computer, dot-mode and vector displays, analog input and output facilities, and a variety of other experimental equipment. The system design and programming support are described and typical applications in scanner control, optical charac ...

Keywords: image processing, interactive terminal, pattern recognition, pseudorandom displays, scanners

7 Video: Measurement study of low-bitrate internet video streaming

Dmitri Loguinov, Hayder Radha

November 2001 **Proceedings of the First ACM SIGCOMM Workshop on Internet Measurement**

Full text available:  pdf(3.00 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we analyse the results of a seven-month real-time streaming experiment, which was conducted between a number of unicast dialup clients, connecting to the Internet through access points in more than 600 major U.S. cities, and a backbone video server. During the experiment, the clients streamed low-bitrate MPEG-4 video sequences from the server over paths with more than 5,000 distinct Internet routers. We describe the methodology of the experiment, the architecture of our NACK-based ...

8 Illustrative risks to the public in the use of computer systems and related technology

Peter G. Neumann

January 1996 **ACM SIGSOFT Software Engineering Notes**, Volume 21 Issue 1

Full text available:  pdf(2.54 MB) Additional Information: [full citation](#)

9 A survey on wavelet applications in data mining

Tao Li, Qi Li, Shenghuo Zhu, Mitsunori Ogihara

December 2002 **ACM SIGKDD Explorations Newsletter**, Volume 4 Issue 2

Full text available:  [pdf\(330.06 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Recently there has been significant development in the use of wavelet methods in various data mining processes. However, there has been written no comprehensive survey available on the topic. The goal of this paper is to fill the void. First, the paper presents a high-level data-mining framework that reduces the overall process into smaller components. Then applications of wavelets for each component are reviewed. The paper concludes by discussing the impact of wavelets on data mining research and ...

10 Large-scale experimental study of Internet performance using video traffic

Dmitri Loguinov, Hayder Radha

January 2002 **ACM SIGCOMM Computer Communication Review**, Volume 32 Issue 1

Full text available:  [pdf\(1.23 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we analyze the results of a seven-month real-time streaming experiment, which was conducted between a number of unicast dialup clients, connecting to the Internet through access points in more than 600 major U.S. cities, and a backbone video server. During the experiment, the clients streamed low-bitrate MPEG-4 video sequences from the server over paths with more than 5,000 distinct Internet routers. We describe the methodology of the experiment, the architecture of our NACK-based ...

11 Object lessons learned from a distributed system for remote building monitoring and operation

Frank Olken, Hans-Arno Jacobsen, Chuck McParland, Mary Ann Piette, Mary F. Anderson

October 1998 **ACM SIGPLAN Notices , Proceedings of the 13th ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications**, Volume 33 Issue 10

Full text available:  [pdf\(1.54 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper we describe our experiences with the design, the deployment, and the initial operation of a distributed system for the remote monitoring and operation of multiple heterogeneous commercial buildings across the Internet from a single control center. Such systems can significantly reduce building energy usage. Our system is distinguished by its ability to interface to multiple heterogeneous legacy building Energy Management Control Systems (EMCSs), its use of the Common Object Request ...

12 Real-time software-based video coder for multimedia communication systems

Ho Chao Huang, Jau-Hsiung Huang, Ja-Ling Wu



September 1993 **Proceedings of the first ACM international conference on Multimedia**

Full text available:  [pdf\(119.60 KB\)](#)  [ps\(190.28 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

Keywords: multimedia system, software-based video compression, video data compression, video phone/conference

13 Computing curricula 2001

September 2001 **Journal on Educational Resources in Computing (JERIC)**

Full text available:  [pdf\(613.63 KB\)](#)  [html\(2.78 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

14 Optical interconnection technology in the telecommunications network

Davis H. Hartman

November 1999 **Proceedings of 1986 ACM Fall joint computer conference**

Full text available:  [pdf\(1.85 MB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)



15 Video Applications: Building an intelligent camera management system

Yong Rui, Liwei He, Anoop Gupta, Qiong Liu

October 2001 **Proceedings of the ninth ACM international conference on Multimedia**

Full text available:  [pdf\(830.24 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)



Given rapid improvements in storage devices, network infrastructure and streaming-media technologies, a large number of corporations and universities are recording lectures and making them available online for anytime, anywhere access. However, producing high-quality lecture videos is still labor intensive and expensive. Fortunately, recent technology advances are making it feasible to build automated camera management systems to capture lectures. In this paper we report our design of such a sys ...

Keywords: automated camera management, lecturer tracking, sound source localization, virtual cinematographer, virtual director

16 Extracting usability information from user interface events

David M. Hilbert, David F. Redmiles

December 2000 **ACM Computing Surveys (CSUR)**, Volume 32 Issue 4

Full text available:  [pdf\(1.50 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)



Modern window-based user interface systems generate user interface events as natural products of their normal operation. Because such events can be automatically captured and because they indicate user behavior with respect to an application's user interface, they have long been regarded as a potentially fruitful source of information regarding application usage and usability. However, because user interface events are typically voluminous and rich in detail, automated support is generally ...

Keywords: human-computer interaction, sequential data analysis, usability testing, user interface event monitoring

17 Satellite-PCS channel simulation in mobile user environments using photogrammetry and Markov chains

Hsin-Piao Lin, Riza Akturan, Wolfhard J. Vogel

September 1997 **Wireless Networks**, Volume 3 Issue 4

Full text available:  [pdf\(970.24 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)



In this paper, we present a system that models the land-mobile satellite communication channel with a Markov chain approach supported by images of the mobile Earth station's (MES) environment. Our method employs a video camera with a fish-eye lens capturing image sequences of the user environment from the position of the moving MES, image and signal processing algorithms to recognize propagation path states and extract their duration and transition probabilities, and modeling of the communi ...

18 Wireless Andrew: building a high speed, campus-wide wireless data network

Bernard J. Bennington, Charles R. Bartel

January 2001 **Mobile Networks and Applications**, Volume 6 Issue 1

Full text available:  [pdf\(159.87 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)



Keywords: Andrew, WaveLAN, integration, wireless network

19 Vision: a digital video library

Wei Li, Susan Gauch, John Gauch, Kok Meng Pua

April 1996 **Proceedings of the first ACM international conference on Digital libraries**

Full text available:  pdf(1.43 MB)

Additional Information: [full citation](#), [references](#), [citing](#), [index terms](#)

Keywords: content-based indexing and retrieving, digital libraries, video and audio processing

20 Network Protocols

Andrew S. Tanenbaum

December 1981 **ACM Computing Surveys (CSUR)**, Volume 13 Issue 4

Full text available:  pdf(3.37 MB)

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